# UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/504,082 | 02/15/2000 | Gen Sasaki | 6318-0024-2 | 5466 |

| | | | |
|---|---|---|---|
| 22850 7590 04/07/2005 | | | EXAMINER |
| OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. | | | AGGARWAL, YOGESH K |
| 1940 DUKE STREET | | | |
| ALEXANDRIA, VA 22314 | | ART UNIT | PAPER NUMBER |
| | | 2615 | |

DATE MAILED: 04/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

| | Application No. | Applicant(s) |
|---|---|---|
| **Office Action Summary** | 09/504,082 | SASAKI, GEN |
| | **Examiner** | **Art Unit** | |
| | Yogesh K Aggarwal | 2615 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *15 October 2004*.

2a)☐ This action is **FINAL**.          2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-15* is/are pending in the application.

    4a) Of the above claim(s) *6-14* is/are withdrawn from consideration.

5)☒ Claim(s) *3-5* is/are allowed.

6)☒ Claim(s) *1,2 and 15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some *  c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

*Response to Arguments*

1.      Applicant's arguments filed 10/15/2004 have been fully considered but they are not

persuasive.

**Examiner's response:**

2.      Applicant argues w.r.t amended claim 1 that Masimo only describes an arrangement of

1st through 4th registers 41a-41d (e.g., first storage section), respectively, connected to selector

42, FIG. 4B, which is not a storage device, but rather a multiplexing device without storage.

Thus, the selector 42 has no storage regions as in Claim 1, and that Masimo's selector 42 reads

on the claimed second storage device. Thus, Masimo describes a first storage section that is not

connected to a second storage section, which is different than the claimed invention. Hence,

applicant respectfully submits that Masimo does not teach or suggest "storage regions of said

first storage means and said storage regions of said second storage means are connected one

another," as in amended Claim 1. The Examiner respectfully disagrees. The selector 42 is not a

multiplexing device. In a multiplexer, the inputs are selected based upon a control signal. In

Masimo, clearly the inputs from the 1st through 4th registers 41a-41d (e.g., first storage section)

are hardwired to the input of the selector device (second storage device) and are finally read and

stored into the second storage device. Therefore the selector 42 stores the outputs of the first

storage register and inputs to the selector 42 (second storage device) as claimed.

3.      Applicant further argues that Masimo does not teach or suggest a signal processing

circuit in an image input apparatus that includes first and second storage sections connected such

that a stored unit image signal is rotated 90 degrees clockwise when transferred and stored in the

first storage section, and then transferred and stored in the second storage section and only the

message data is rotated and not the image data. The examiner respectfully disagrees. Masimo

teaches that data can be read out of the rotation buffer 13 or 14 in an order different from the

order in which data is written into the rotation buffer 13 or 14, with the result that output data is

90 degree rotated relative to the input data (col. 5 lines 37-41). Therefore if the display screen is

rotated anticlockwise, the data will be rotated clockwise by first writing the data into buffer 14

and reading out from the buffer 13. Finally the Examiner notes that even though image data is

not rotated and only text data is rotated, the principle remains the same since both these datas are

converted into bitstreams before rotation.

4.      Applicant argues with respect to claim 2 that Mitchell does not teach or suggest an

apparatus configured to reflect data about a centerline. Further, applicant argues the statement in

the outstanding Office Action that Mitchell discloses when the register groups are connected as

shown in figure 4 of Mitchell, the image is rejected along its centerline. Clearly this statement in

the previous Office action referred to registers 5-8 and 17-20 (figure 4) and the lines

interconnecting them logically via pointers and not the original and rotated image. Therefore

Mitchell does teach reflection along a centerline of the image array.

5.      Applicant's arguments with respect to claims 3 or 5 are persuasive and the prior art fails

to teach the claimed limitations, so claims 3 and 5 are allowed.

6.      Examiner appreciates the applicant's rewriting the objected claim 4 into an independent

form to make it allowable.

### *Claim Rejections - 35 USC § 103*

1.      The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.      Claims 1 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masimo

et al. (US Patent # 5,189,404) in view of Anderson (US Patent # 6,011,585).

[Claim 1]

Masimo et al. teaches a signal processing circuit (figure 3a) in an image input apparatus (figure

1) which stores, in storage units of a main memory (11), a unit image signal in predetermined

units and arranged in two dimensions, said signal processing circuit reading and processing said

unit image signal stored in said main memory, said signal processing circuit, comprising:

first (figure 4b, buffer 42 acts as a storage device) and second storage (figures 1, 3a and 4b,

buffer 13 or 14) sections provided with a plurality of storage regions are connected to one

another (col. 4 lines 25-31). Although Masimo is silent regarding the storage regions being of the

same number of bits as said unit image signal, Official notice is taken of the fact that it is well

known to produce digitized image data in an 8-bit format. Thus the 8x8 image storage section

disclosed in Masimo (col. 4 lines 25-31) would clearly conform to a well-known image data

format. In Masimo the storage regions of said first storage section and said storage regions of

said second storage section are connected one another (figure 4b), such that an array of said unit

image signal stored in said main memory is stored in said storage regions of said second storage

section in a state of being rotated 90 degrees clockwise (col. 4 lines 54-61, figure 3B, Also as

taught in col. 5 lines 37-41 data can be read out of the rotation buffer 13 or 14 in an order

different from the order in which data is written into the rotation buffer 13 or 14, with the result

that output data is 90 degree rotated clockwise or anticlockwise relative to the input data),

through proceeding that said unit image signal stored in said main memory is transferred and stored in said storage regions of said first storage section (42), and then said unit image signal stored in said storage regions of said first storage section is transferred and stored in said storage regions of said second storage section (13 or 14).

Masimo does not specifically identify the source of the unit image signal and therefore does not disclose it as being picked up by an image pickup device. However it is well known to produce image signals using a camera as disclosed by Anderson's image pick up device for capturing images (figure 3A: 304).

Therefore taking the combined teachings of Masimo and Anderson, it would have been obvious to one skilled in the art to have been motivated at the time of the invention to provide the Masimo device with image signals from an image pick-up device since image pick-up devices are commonly used sources for image data.

[Claim 15]

Masimo teaches wherein an array of said unit image signal stored in said main memory (figure 3a, element 11), is stored in said storage regions of said second storage section (13) in a state of being rotated 90 degrees counterclockwise (col. 4 lines 54-61) when said unit image signal stored in said main memory (11) is transferred and stored in said storage regions of said first storage section (41a-41d), and then said unit image signal stored in said storage regions of said first storage section is transferred and stored in said storage regions of said second storage section (figure 4b).

3.     Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mitchell et al. (US Patent # 4,689,824) in view of Anderson (US Patent # 6,011,585).

[Claim 2]

Mitchell et al. teaches a signal processing circuit of an image input apparatus (figure 4), comprising first (registers 5-8) and second storage means (registers 17-20) provided with a plurality of storage regions of the same number of bits (8 bits) as a unit image signal in predetermined units (See figure 4) and arranged in two dimensions, wherein said storage regions of said first storage means and said storage regions of said second storage means are directly connected to one another by a predetermined connecting line (logical via pointers), such that an array of said unit image signal stored in said storage regions of said first storage means is reflected about a centerline of said array, to be stored in said storage regions of said second storage means (When the register groups are connected as shown in figure 4 of Mitchell, the image is reflected along its centerline).

Mitchell does not specifically identify the source of the unit image signal and therefore does not disclose it as being obtained by an image pickup device that is in an image input apparatus. However Anderson discloses an image pick up device for capturing images (figure 3A: 304) contained in an image input apparatus (figure 2, camera) and a memory, which contains an autorotate unit for rotating images (col. 2 lines 48-61).

Therefore taking the combined teachings of Mitchell and Anderson, it would have been obvious to one skilled in the art to have been motivated at the time of the invention to have an image pick up device contained in an image input apparatus as taught in Mitchell to be included in an image pick-up device. The benefit of doing so would be to transform the captured image data into rotated image data in response to a portrait signal as taught by Anderson (col. 2 lines 56-58).

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Yogesh K Aggarwal whose telephone number is (571) 272-7360.

The examiner can normally be reached on M-F 9:00AM-5:30PM.

4.      If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, James Groody can be reached on (571) 272-7950. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

5.      Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


YKA
March 31, 2005

TUAN HO
PRIMARY EXAMINER